Taylor Winter

SENIOR DATA SCIENTIST

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Summary

I am currently the Senior Data Scientist for Data Ventures, the commercial arm of New Zealand's national statistics agency (Statistics NZ). In this line of work I am responsible for the quality, methodology, and processing of large datasets such as telecommunications data, EFTPOS data, and banking data. As well as technical obligations, my role also has a heavy consultancy focus, whereby I am required to work closely with a variety of customers to understand their needs around data. Alongside my work, I am concurrently conducting a PhD in Psychology with a strong focus on structural equation modeling of longitudinal datasets. Through my combination of work and studies, I have a broad range of experience in advanced statistical methods and the ability to productionise my methods in a cloud environment. Previous to my current role, I focused on producing analytics with a large data warehouse containing linked person-level administrative data from Government called the Integrated Data Infrastructure (IDI).

Employment

Statistics New Zealand   *2019 - Present*
SENIOR DATA SCIENTIST

University of Otago   *2019 - 2020*
ASSISTANT RESEARCH FELLOW

Te Runanga o Ngai Tahu   *2018 - 2019*
STATISTICIAN

Statistics New Zealand   *2016 - 2019*
STATISTICAL ANALYST

University of Otago   *2013 - 2016*
SENIOR RESEARCH ASSISTANT

Queensland Department of Natural Resources and Mines   *2013 - 2015*
PROJECT OFFICER

University of Otago   *2012 - 2014*
RESEARCH ASSISTANT

Education

Victoria University of Wellington   *Wellington*
DOCTOR OF PHILOSOPHY   *Present*

University of Otago   *Dunedin*
MASTER OF SCIENCE   *2016*

Awards and scholarships

2018	IPANZ Young Professional Of The Year (Top 3)	*Institute of Public Administration NZ*
2018	Victoria Doctoral Scholarship	*Victoria University of Wellington*
2015	Otago Research Master's Scholarship	*University of Otago*

Publications

1. Winter, T., Jose, P., Riordan, B., Bizumic, B., Ruffman, T., Hunter, J., & Scarf, D. (n.d.). Left-wing support of authoritarian submission to protect against societal threat. *Scientific Reports*.

2. Riordan, B., Winter, T., Flett, J., Scarf, D., Jose, P., & Conner, T. (n.d.). Does the fear of missing out (FoMO) moderate the relationship between social networking use and affect? A daily diary study. *Computers in Human Behavior*.

3. Winter, T., Riordan, B., Surace, A., Scarf, D., & Jose, P. (2020). A tutorial on the use of informative bayesian priors for minority research. *Preprint: PsyArXiv*.

4. Zimmerman, H., Riordan, B., Winter, T., Bartonicek, A., & Scarf, D. (n.d.). Are new zealand psychology students more susceptible to essentialist explanations for mental illness? Neuroessentialism and mental illness stigma in psychology and non-psychology students. *New Zealand Journal of Psychology*.

5. Winter, T., Scarf, D., Riordan, B., Hunter, J., Tustin, K., Gollop, M., Taylor, N., Kokaua, J., & Poulton, R. (n.d.). A longitudinal study of mental wellbeing in students that transition into PhD study. *Frontiers in Psychology*.

6. Winter, T., Conner, T., & Jose, P. (2021). Methodological and conceptual complexities of assessing relationships between single-occasion CRP inflammation and daily affect. *Brain, Behavior, and Immunity - Health*.

7. Raubenheimer, J. E., Riordan, B. C., Merrill, J. E., Winter, T., Ward, R. M., Scarf, D., & Buckley, N. A. (2021). Hey google! Will new zealand vote to legalise cannabis? Using google trends data to predict the outcome of the 2020 new zealand cannabis referendum. *International Journal of Drug Policy*.

8. Winter, T., Riordan, B., Pakpour, A., Griffiths, M., Mason, A., Poulgrain, J., & Scarf, D. (2020). Evaluation of the english version of the fear of COVID-19 scale and its relationship with behavior change and political beliefs. *International Journal of Mental Health and Addiction*.

9. Riordan, B. C., Raubenheimer, J., Ward, R. M., Merrill, J. E., Winter, T., & Scarf, D. (2020). Monitoring the sentiment of cannabis-related tweets in the lead up to new zealands cannabis referendum. *Drug and Alcohol Review*.

10. Scarf, D., Zimmerman, H., Winter, T., Boden, H., Graham, S., Riordan, B. C., & Hunter, J. A. (2020). Association of viewing the films joker or terminator: Dark fate with prejudice toward individuals with mental illness. *JAMA Network Open*.

11. Graham, S., Mason, A., Riordan, B., Winter, T., & Scarf, D. (2020). Taking a break from social media improves wellbeing through sleep quality. *Cyberpsychology, Behavior, and Social Networking*.

12. Winter, T., Conner, T., & Jose, P. (2020). Identifying profiles of affective change: An ecological momentary assessment of flourishers. *Emotion*.

13. Trevis, K. J., McTavish, E., Winter, T., Fu, Y., McTavish, J., Wilson, B., Oliver, J., & Franz, E. A. (2019). Harnessing the brain's neuro-compensatory processes: Lessons from a high-functioning person with complete agenesis of the corpus callosum. *Neuropsychologie Clinique Et Appliquée*.

14. Winter, T., Riordan, B., & Surace, A. (2019). The relationship between hazardous alcohol use and discrimination among māori in aotearoa new zealand. *Addiction*.

15. Surace, A., Riordan, B., & Winter, T. (2019). Do new zealand sexual minorities engage in more hazardous drinking than non-sexual minorities? *Drug and Alcohol Review*.

16. Pittar, N., Winter, T., Falland-Cheung, L., Tong, D., & Waddell, J. N. (2018). Scalp simulation a novel approach to site-specific biomechanical modeling of the skin. *Journal of the Mechanical Behavior of Biomedical Materials*.

17. Falland-Cheung, L., Waddell, J. N., Lazarjan, M. S., Jermy, M. C., Winter, T., Tong, D., & Brunton, P. A. (2017). Use of agar/glycerol and agar/glycerol/water as a translucent brain simulant for ballistic testing. *Journal of the Mechanical Behavior of Biomedical Materials*.

18. Franz, E. A., Fu, Y., Moore, M., Winter, T., Mayne, T., Debnath, R., & Stringer, C. (2016). Fooling the brain by mirroring the hand: Brain correlates of the perceptual capture of limb ownership. *Restorative Neurology and Neuroscience*.

19. Tong, D. C., Winter, T. J., Jin, J., Bennett, A. C., & Waddell, J. N. (2015). Quantification of subconcussive impact forces to the head using a forensic model. *Journal of Clinical Neuroscience*.

20. Winter, T. J., & Franz, E. A. (2014). Implication of the anterior commissure in the allocation of attention to action. *Frontiers in Psychology*.

Presentations and posters

Authoritarian submission on the left and right during the covid-19 pandemic in New Zealand   *2020*

New Zealand Psychological Society Conference, Wellington

Using overseas surveys to produce reliable models of sexual minorities   *2019*

New Zealand Population Conference, Wellington

Alcohol use disparities among gender and sexual minorities in New Zealand (Poster) *2019*

Collaborative Perspectives on Addiction, Rhode Island

Iwi data tool using integrated data and R Shiny *2017*

Iwi Data Conference, Christchurch

Using data to support a collective impact model of Maori potential *2016*

Population Association of New Zealand Conference, Christchurch

The effect of motherhood on income *2016*

New Zealand Association of Economists conference, Wellington

A machine learning approach to classifying life course outcomes *2016*

Longitudinal and multivariate analysis network (Stats NZ), Wellington

Methodology for comparing incomes between parents and non-parents *2016*

Statistical methods seiminar (Stats NZ), Wellington

Inter-hemispheric inhibition in the autistic brain *2014*

Neuroethics seminar, Dunedin

Skills

- Research design and analysis
- Structural equation modelling and causal analysis
- Bayesian statistics and multi-level modelling
- Machine learning techniques such as random forests and neural nets
- Cloud infrastructure experience via AWS
- Teaching reproducible research practices and statistics
- Health and Social psychology research
- Knowledge of Tikanga Māori